WHAT IS CLAIMED IS:

1. A thermoelectric heat exchanger system comprising:

a first heat exchanger formed about an axis and configured such that fluid flows along the first heat exchanger at least partially in a first direction;

a second heat exchanger formed about the axis and configured such that fluid flows along the second heat exchanger at least partially in a direction other than the first direction; and

a thermoelectric device having opposing surfaces that generate a temperature gradient between one surface and an opposing surface in response to electrical current flowing through the thermoelectric device, the one surface in thermal communication with the first heat exchanger and the opposing surface in thermal communication with the second heat exchanger.

2. The system of Claim 1, wherein the first direction is at least partially outward from the axis.

3. The system of Claim 2, wherein the first direction is at least partially perpendicular to the axis.

4. The system of Claim 3, wherein the second direction is at least partially along the axis.

5. The system of Claim 2, wherein the first direction is at least partially at an angle from the axis.

6. The system of Claim 5, wherein the second direction is at least partially at an angle from the axis.

7. The system of Claim 1, wherein the first direction is at least partially along the axis.

8. The system of Claim 7, wherein the second direction is at least partially at an angle from the axis.

9. The system of Claim 1, further comprising a heat transfer member in thermal communication with the one or the opposing surface of the thermoelectric device and in thermal communication with the first or second heat exchanger.

10. The system of Claim 9, wherein at least one of the first and second heat exchangers are formed in segments to provide thermal isolation in the direction of flow.

11. The system of Claim 10, wherein the at least one heat exchanger is formed of a plurality of blades that define a series of spaces between the blades.

12. The system of Claim 11, wherein the thermal isolation is in the direction of flow.

13. The system of Claim 1, further comprising a housing containing at least one of the first and the second heat exchangers and forming an outlet through which air exits after passing through the at least one of the first or second heat exchangers.

14. The system of Claim 1, wherein at least the first or second heat exchanger comprises a plurality of outwardly-extending heat exchange surfaces, wherein the heat exchange surfaces form a fluid flow member.

15. The system of Claim 14, further comprising an auxiliary fan positioned to operate in conjunction with the plurality of outwardly-extending heat exchanger surfaces to enhance the fluid flow.

16. A thermoelectric heat exchanger system comprising:

a thermoelectric device configured to generate a thermal gradient between a first temperature side and a second temperature side in response to an electrical current;

a at least one first heat exchanger in thermal communication with the first or the second temperature side of the thermoelectric device, the heat exchanger rotatable about a rotational axis;

an auxiliary fan configured to rotate about the rotational axis and to generate fluid flow along the heat exchanger.

17. The system of Claim 16, wherein the first heat exchanger is oriented such that fluid flow from the auxiliary fan flows through the heat exchanger along the rotational axis.

18. The system of Claim 16, further comprising a second heat exchanger, the second heat exchanger configured to generate a fluid flow in a first direction away from the rotational axis with rotation about the rotational axis, and the first heat exchanger oriented such that fluid flow generated by the auxiliary fan flows through the first heat exchanger in a second direction other than the first direction.

19. The system of Claim 16, wherein at least one of the first and second heat exchangers form blades extending outward from the rotational axis and define a series of spaces between the blades.

20. The system of Claim 19, wherein the blades are constructed to provide thermal isolation in the direction of flow.

21. A thermoelectric heat exchanger system comprising:

a thermoelectric device formed about an axis and having opposing surfaces that generate a temperature gradient between one surface and an opposing surface in response to electrical current flowing through the thermoelectric device; and

first and second heat exchangers formed about the axis and configured such that fluid flows along the first heat exchanger and along the second heat exchanger generally away from the axis, the first heat exchanger in thermal communication with the one surface, and the second heat exchanger in thermal communication with the opposing surface, wherein at least one of the first and second heat exchangers are formed to provide thermal isolation in the direction of fluid flow between a plurality of portions of the at least one heat exchanger.

22. The system of Claim 21, wherein the heat exchanger and thermoelectric device rotate about the axis during operation, the heat exchangers operating to induce fluid flow through the heat exchangers.

23. The system of Claim 21, wherein the heat exchangers and thermoelectric device are stationary, further comprising an auxiliary fan that rotates about the axis and causes fluid to flow along at least one of the first and second heat exchangers.

24. The system of Claim 21, wherein at least one of the first and second heat exchangers is formed in segments to provide the thermal isolation.

25. The system of Claim 24, wherein the at least one heat exchanger is formed of a plurality of blades that define a series of spaces between the blades.

26. The system of Claim 21, wherein the blades are constructed in segments substantially thermally isolated from each other in the direction of flow.

27. The system of Claim 21, wherein at least the first or second heat exchanger comprises a plurality of outwardly-extending heat exchange surfaces, wherein the heat exchange surfaces form a fluid flow member.

28. The system of Claim 27, further comprising an auxiliary fan positioned to operate in conjunction with the plurality of outwardly-extending heat exchanger surfaces to enhance the fluid flow.

29. A thermoelectric heat exchanger system comprising:

a thermoelectric device formed about an axis and having opposing surfaces that generate a temperature gradient between one surface and an opposing surface in response to electrical current flowing through the thermoelectric device; and

first and second heat exchangers formed about the axis and configured such that fluid flows along the first heat exchanger and along the second heat exchanger generally away from the axis, the first heat exchanger in thermal communication with the one surface, and the second heat exchanger in thermal communication with the opposing surface; and

an auxiliary fan that rotates about the axis and generates fluid flow along at least one of the first and second heat exchangers.

30. The system of Claim 29, wherein at least one of the first and second heat exchangers is formed in segments to provide the thermal isolation.

31. The system of Claim 30, wherein the at least one heat exchanger is formed of a plurality of blades that are constructed in segments.

32. The system of Claim 29, wherein the segments are substantially thermally isolated from each other in the direction of fluid flow.

33. The system of Claim 29, wherein at least the first or second heat exchanger comprises a plurality of outwardly-extending heat exchange surfaces, wherein the heat exchange surfaces form a fluid flow member.

34. A method of conditioning a fluid flow comprising the steps of:

flowing current through a thermoelectric device having opposing surfaces to generate a temperature gradient between a first surface and a second surface of the thermoelectric device;

flowing a fluid along a first heat exchanger formed about an axis at least partially in a first direction, the first heat exchanger in thermal communication with the first surface; and

flowing a fluid along a second heat exchanger formed about the axis at least partially in a direction other than the first direction, the second heat exchanger in thermal communication with the second surface.

35. The method of Claim 34, wherein the first direction is at least partially outward from the axis.

36. The method of Claim 35, wherein the first direction is at least partially perpendicular to the axis.

37. The method of Claim 36, wherein the second direction is at least partially along the axis.

38. The method of Claim 35, wherein the first direction is at least partially at an angle from the axis.

39. The method of Claim 38, wherein the second direction is at least partially at an angle from the axis.

40. The method of Claim 34, wherein the first direction is at least partially along the axis.

41. The method of Claim 40, wherein the second direction is at least partially at an angle from the axis.

42. The method of Claim 34, further comprising the step of forming at least one of the first and second heat exchangers in segments to provide thermal isolation in the direction of flow.

43. The method of Claim 34, wherein the flowing of fluid is provided by an auxiliary fan that rotates about the axis.

44. The method of Caim 34, where the flowing of fluid along at least one of the first and second heat exchangers is provided by the first or second heat exchanger rotating about the axis.

45. A method of conditioning flowing fluid comprising the steps of :

flowing current through a thermoelectric device having opposing surfaces to generate a temperature gradient between a first surface and a second surface of the thermoelectric device;

flowing a fluid along a first heat exchanger formed and rotational about an axis, the first heat exchanger in thermal communication with the first surface;

the flowing at least partially provided via an auxiliary fan configured to rotate about the axis and to generate fluid flow along the first heat exchanger.

46. The method of Claim 45, wherein the first heat exchanger is oriented such that fluid from the auxiliary fan flows through the heat exchanger along the rotational axis.

47. The method of Claim 45, further comprising the step of generating fluid flow along a second heat exchanger in a direction away from the rotational axis with rotation about the rotational axis, the second heat exchanger at least partially generating the fluid flow along the second heat exchanger.

48. The method of Claim 45, wherein the heat exchanger is configured to provide thermal isolation in the direction of fluid flow between at least first and second segments forming the heat exhanger

49. A method of conditioning flowing fluid comprising the steps of:

generating a temperature gradient in a thermoelectric device between one surface and an opposing surface; and

flowing fluid along first and second heat exchangers formed about an axis and configured such that the fluid flows along the first heat exchanger and along the second heat exchanger generally away from the axis, the first heat exchanger in thermal communication with the one surface, and the second heat exchanger in thermal communication with the opposing surface, wherein at least one of the first and second heat exchangers are formed to provide thermal isolation in the direction of fluid flow between a plurality of segments of the at least one heat exchanger.

50. The method of Claim 49, further comprising rotating the heat exchangers and thermoelectric device about the axis during operation, the heat exchangers operating to induce fluid flow through the heat exchangers.

51. The method of Claim 49, wherein the heat exchangers and thermoelectric device are stationary, further comprising generating fluid flow along at least one of the first and second heat exchangers by rotating an auxiliary fan about the axis.

52. The method of Claim 49, wherein at least one of the first and second heat exchangers is formed in segments to provide the thermal isolation in the direction of fluid flow.